

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-50 (canceled).

Claim 51 (previously presented): A method of transfection of DNA into cells, comprising contacting DNA with a fullerene derivative having 1 to 4 nitrogen-containing hydrophilic side chains or a salt thereof in the presence of cells.

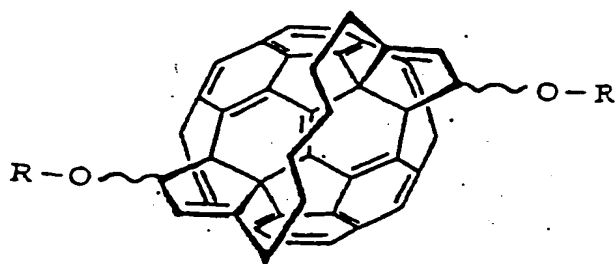
Claim 52 (previously presented): The method of Claim 51, wherein said nitrogen-containing hydrophilic side chain is a hydrocarbon group which has 1 or 2 straight-chain or branched-chain substituent groups each comprising 1 to 10 nitrogen atoms and 2 to 30 carbon atoms, and is bonded to 1 or 2 of the 2 to 8 sp^3 carbon atoms present on the fullerene core, with the proviso that there may exist a cross-linking moiety comprising an alkylene group bridging two or more nitrogen-containing hydrophilic side chains.

Claim 53 (previously presented): The method of Claim 51, wherein said fullerene derivative or salt thereof has one or two nitrogen-containing hydrophilic side chains.

Claim 54 (previously presented): The method of Claim 51, wherein said fullerene derivative contains a nitrogen-containing hydrophilic side chain which is a hydrocarbon group which has 1 or 2 straight-chain or branched-chain substituent groups each comprising 2 to 8 nitrogen atoms and 2 to 20 carbon atoms, and is bonded to two of the 2 to 8 sp^3 carbon atoms present on the fullerene core, with the proviso that there may exist a cross-linking moiety comprising an alkylene group bridging two nitrogen-containing hydrophilic side chains.

Claim 55 (currently amended): The method of Claim 51, wherein said fullerene derivative and said DNA are contacted in a relative amount such that a ratio of molecules of said fullerene compound derivative to base pairs of DNA is within 4:1 to 1:2.

Claim 56 (currently amended): The method of Claim 51, wherein said fullerene derivative has the following general formula or a salt thereof:



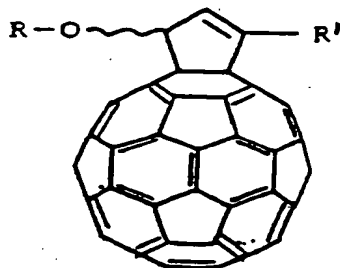
wherein the two Rs may be the same or different and each represents a straight-chain or branched-chain acyl group comprising 1 to 10 nitrogen atoms and 2 to 30 carbon atoms or hydrogen,

with the proviso that the two Rs are not both hydrogen.

Claim 57 (previously presented): The method of Claim 56, wherein the two Rs are the same or different and each represents a straight-chain or branched-chain acyl group comprising 2 to 8 nitrogen atoms and 2 to 20 carbon atoms.

Claim 58 (previously presented): The method of Claim 56, wherein the two Rs are the same or different and each represents a [N-(N,N-di(lower)alkylamino)(lower)alkyl-N-(lower)alkyl]amino(lower)alkanoyl group.

Claim 59 (withdrawn-currently amended): The method of Claim 51, wherein said fullerene derivative has the following general formula or a salt thereof:



wherein R represents a straight-chain or branched-chain acyl group comprising 1 to 10 nitrogen atoms and 2 to 30 carbon atoms and R' represents hydrogen or a lower alkyl group.

Claim 60 (withdrawn-currently amended): The method of Claim 59, wherein R represents a straight-chain or branched-chain acyl group ~~comprising 2~~ comprising 2 to 8 nitrogen atoms and 2 to 20 carbon atoms.

Claim 61 (withdrawn): The method of Claim 59, wherein R is an [N-(N,N-di(lower)alkylamino)(lower)alkyl-N-(lower)alkyl]amino(lower)alkanoyl group.

Claim 62 (new): The method of Claim 51, which comprises compacting said DNA by contacting said DNA with said fullerene derivative or a salt thereof in the presence of cells.

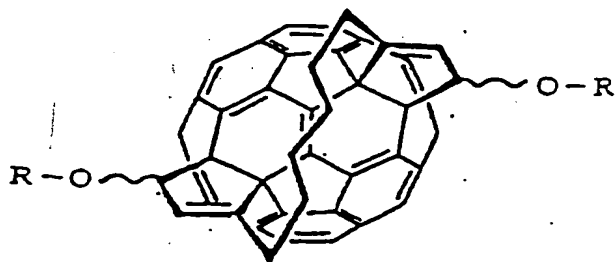
Claim 63 (new): The method of Claim 62, wherein said nitrogen-containing hydrophilic side chain is a hydrocarbon group which has 1 or 2 straight-chain or branched-chain substituent groups each comprising 1 to 10 nitrogen atoms and 2 to 30 carbon atoms, and is bonded to 1 or 2 of the 2 to 8 sp^3 carbon atoms present on the fullerene core, with the proviso that there may exist a cross-linking moiety comprising an alkylene group bridging two or more nitrogen-containing hydrophilic side chains.

Claim 64 (new): The method of Claim 62, wherein said fullerene derivative or salt thereof has one or two nitrogen-containing hydrophilic side chains.

Claim 65 (new): The method of Claim 62, wherein said fullerene derivative contains a nitrogen-containing hydrophilic side chain which is a hydrocarbon group which has 1 or 2 straight-chain or branched-chain substituent groups each comprising 2 to 8 nitrogen atoms and 2 to 20 carbon atoms, and is bonded to two of the 2 to 8 sp^3 carbon atoms present on the fullerene core, with the proviso that there may exist a cross-linking moiety comprising an alkylene group bridging two nitrogen-containing hydrophilic side chains.

Claim 66 (new): The method of Claim 62, wherein said fullerene derivative and said DNA are contacted in a relative amount such that a ratio of molecules of said fullerene derivative to base pairs of DNA is within 4:1 to 1:2.

Claim 67 (new): The method of Claim 62, wherein said fullerene derivative has the following general formula or a salt thereof:



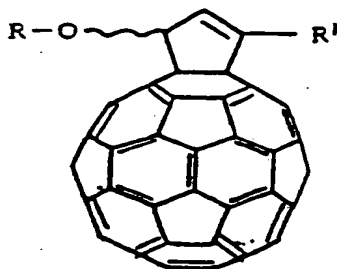
wherein the two Rs may be the same or different and each represents a straight-chain or branched-chain acyl group comprising 1 to 10 nitrogen atoms and 2 to 30 carbon atoms or hydrogen,

with the proviso that the two Rs are not both hydrogen.

Claim 68 (new): The method of Claim 67, wherein the two Rs are the same or different and each represents a straight-chain or branched-chain acyl group comprising 2 to 8 nitrogen atoms and 2 to 20 carbon atoms.

Claim 69 (new): The method of Claim 67, wherein the two Rs are the same or different and each represents a [N-(N,N-di(lower)alkylamino)(lower)alkyl-N-(lower)alkyl]amino(lower)alkanoyl group.

Claim 70 (new): The method of Claim 62, wherein said fullerene derivative has the following general formula or a salt thereof:



wherein R represents a straight-chain or branched-chain acyl group comprising 1 to 10 nitrogen atoms and 2 to 30 carbon atoms and R' represents hydrogen or a lower alkyl group.

Claim 71 (new): The method of Claim 70, wherein R represents a straight-straight-chain or branched-chain acyl group comprising 2 to 8 nitrogen atoms and 2 to 20 carbon atoms.

Claim 72 (new): The method of Claim 70, wherein R is an [N-(N,N-di(lower)alkylamino)(lower)alkyl-N-(lower)alkyl]amino(lower)alkanoyl group.

Claim 73 (new): The method of Claim 51, wherein said contacting of said DNA with said fullerene derivative is carried out in a buffer.

Claim 74 (new): The method of Claim 62, wherein said contacting of said DNA with said fullerene derivative is carried out in a buffer.